Implementing a Hospice based Ultrasound Service – The first year’s experience

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INTRODUCTION
Saint Francis Hospice (SFH) offers specialist palliative care to patients with any life-limiting illness, at any stage of that illness, usually to those within the last year of life. Having personal experience of the tremendous support provided by them, the first author approached the Medical Director (second author) to discuss developing an on-site ultrasound service.

DEVELOPING THE SERVICE
BMUS Ultrasound Clinical Governance Guidelines (2008) were consulted to draw up a ‘Service Description & Guidelines for Best Practice’ protocol. An ultrasound machine was generously donated by Spire Healthcare Group and a hospice scanning service started in July 2013. Despite being a volunteer service we were keen for this to be established to professional standards. Thus all examinations are medically requested using a SFH-specific request form and the in-house computer system was adapted to enable storage of the reports within the patient notes. A process of regular audit of images and reports was developed with a local consultant radiologist.

RESULTS
Over the following year:
• 58 scans were carried out on 52 patients
• 2 scans were cancelled on the day, due to deterioration of the patient’s condition
• Ages ranged from 27 – 94. 20 patients were male, and 32 female
• 45 people were inpatients, 3 patients were referred from the day-therapy unit and 4 from the community team

Of the 52 patients:
• 5 people are lost to follow-up, either through discharge from the hospice or relocation.
• 46 have died; (post scan survival 3 - 359 days), with a median of 32 days and a mean of 60 days.
• 1 person is known to still be alive (post-scan survival of 16 months as of 30.09.15).

A variety of scans were performed as shown:

<table>
<thead>
<tr>
<th>TYPE</th>
<th>POSITIVE</th>
<th>NEGATIVE</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Abdomen</td>
<td>29</td>
<td>8</td>
<td>37</td>
</tr>
<tr>
<td>Chest ? Effusion</td>
<td>4</td>
<td>1</td>
<td>5</td>
</tr>
<tr>
<td>Leg ? DVT</td>
<td>1</td>
<td>7</td>
<td>8</td>
</tr>
<tr>
<td>Arm ? DVT</td>
<td>0</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Knee ? Effusion</td>
<td>0</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Buttock</td>
<td>1</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Pelvis</td>
<td>1</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Neck</td>
<td>1</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>TOTAL</td>
<td>37 (63.8%)</td>
<td>21 (36.2%)</td>
<td>58 (100%)</td>
</tr>
</tbody>
</table>

A wide range of pathologies were found, from metastatic cancer progression to gallstones accounting for RUQ pain. Abdominal ascites was found in thirteen people, five of whom subsequently had successful paracentesis after marking of the most suitable site for drain insertion. Paracentesis was not undertaken in the remainder, either because it was not clinically required or due to the clinical condition of the patient.

One person had been booked for transfer to the local hospital for pleuritic fluid drainage. However, the scan revealed solid rather than fluid build-up, hence an unnecessary and disruptive transfer was avoided.

Eight scans were for suspected urinary retention, three of which were positive. Inappropriate urinary catheterisation was avoided in the remaining five cases.

CONCLUSION
Establishing guidelines to ensure safe practice and to equip staff with confidence to request a scan, and learning when a scan would be helpful, has taken time but we have been able to demonstrate that a hospice based service is achievable, effective and safe. Clinicians and patients value not having to travel for a hospital scan when poorly and having more certainty in clinical scenarios when symptoms and signs are subtle or complex.

Acknowledgements
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